Field Study with the Predatory Mite (Non-guideline)

MRID: 45455014
Chemical Name: Pyraclostrobin
PC Code: 099100
EPA DP Barcode: D418951
Test Material: BAS 500 00F
Purity: Pyraclostrobin (23%)

Citation: Gossmann. A. 1998. Effects of BAS 500 00F on Predatory Mites *Typhlodromus pyri*, Scheuten (Acari, Phytosediiae) in vine (field experiment). Lab project number: 2380064: 1988/10534. Unpublished study prepared by IBACON GmBH.

Study Summary: Predatory mites (*Typhlodoromus pyri*) were exposed to pyraclostrobin in a field setting (vineyard in Groß Umstadt, Germany). The vineyard was homogenous in terms of cultivar, age of plants, and agricultural management. Of particular note is that the entire vineyard did receive pesticide treatments for pests throughout the course of the study, some of which are reported as being "slightly harmless" to predatory mites. The entire vineyard received the same pesticide/agricultural management. The study was conducted from May through September 1997.

Three treatments were applied using a backpack sprayer: negative control (water), positive control (mancozeb 2.2 lb ai/A), and pyraclostrobin (0.14 lb ai/A). Applications were made 8 times with application intervals of 12 to 14 days (except for the 3rd and 5th applications which were carried out with an interval of 15 days). Mite densities were assessed prior to the first application, 7 days after the first application, 7 days after the final (8th) application, and 4 weeks after the final application. For each treatment, there were four replicates with 12 grapevines per replicate (except one of the positive control and one of the pyraclostrobin replicates only had 11 vines because of frost damage). Each experimental plot contained a negative control, positive control, and pyraclostrobin replicate. A minimum of four untreated grapevines separated replicates within the same row. To minimize potential contamination from other replicates in other rows, one row was left untreated between rows containing experimental plots. Mite density samples were collected from the 8 central plants (total of 25 leaves per replicate) in the center of each replicate. Samples were processed in a laboratory using a wash off method to remove the mites from the leaves. All mite life-stages (larvae, nymph, adult) were included in the count.

There were no statistically significant differences in mite densities among the treatment groups prior to the first application. At the end of the experiment, there were no statistically significant differences between the negative control and the pyraclostrobin treatment group (Table 1).

Table 1. Change in predatory mite densities compared with the negative control after exposure to pyraclostrobin or positive control (mancozeb)

Sample Date	**Pyraclostrobin 8 apps. at 0.14 lb ai/A (% change in density)**	**Positive Control (Mancozeb) 8 apps. at 2.2 lb ai/A) (% change in density)**
6/3/97 (7 days after first app)	17	42
9/8/97 (7 days after eighth app)	-50	96*
9/29/97 (4 weeks after eighth app)	12	98*

*denotes statistical significance from the negative control

Classification: Supplemental because the non-guideline study does not fulfill a data requirement.

Reviewer Comments:

- This study was conducted according to Good Laboratory Practices (OECD) and BBA Guideline VI/23-2.3.4 (Heimann-Detlefsen, 1991).
- Typical agricultural practices were employed at the vineyard, which included the application of pesticides to manage other pests. The treatments were uniform across the vineyard, but introduce additional uncertainty into the study.
- The study is scientifically valid.
- This study may be useful for qualitative purposes and demonstrates that pyraclostrobin had no effect on predatory mites under field conditions at a rate of 0.14 lb ai/A.

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Date: 5/16/14

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